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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,609	08/03/2001	Bret D. Cannon	50005-19	7493

7590

09/11/2003

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EXAMINER

ROSENBERGER, RICHARD A

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/921,609	Applicant(s) CANNON ET AL.	
	Examiner Richard A Rosenberger	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-73 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0801</u> | 6) <input type="checkbox"/> Other: |

1. On the Form 1449, Information Disclosure Statement, filed 3 August 2001, there are two non-patent literature documents cited, both apparently by Applicants and/or their coworkers.

The first, by Cannon, Haywood, and Koren ("3D Measurement of Stress within Tempered Glass Plates"), is given with no publication data, including no date, on either the form 1149 or the document itself. Thus it is unclear whether this document is a publication for disclosure purposes, and, if it is, if it available under 35 USC 102(b).

The second document, Slides from "Proceedings of the FY 1999 Glass Industry Project Review" has a date, on both the document itself and the form 1449, of 13-14 September 1999. As the filing date of this application is 3 August 2001, more than a year after the date of the document, the disclosure in this document appears to be available under 35 USC 102(b), and is here so taken.

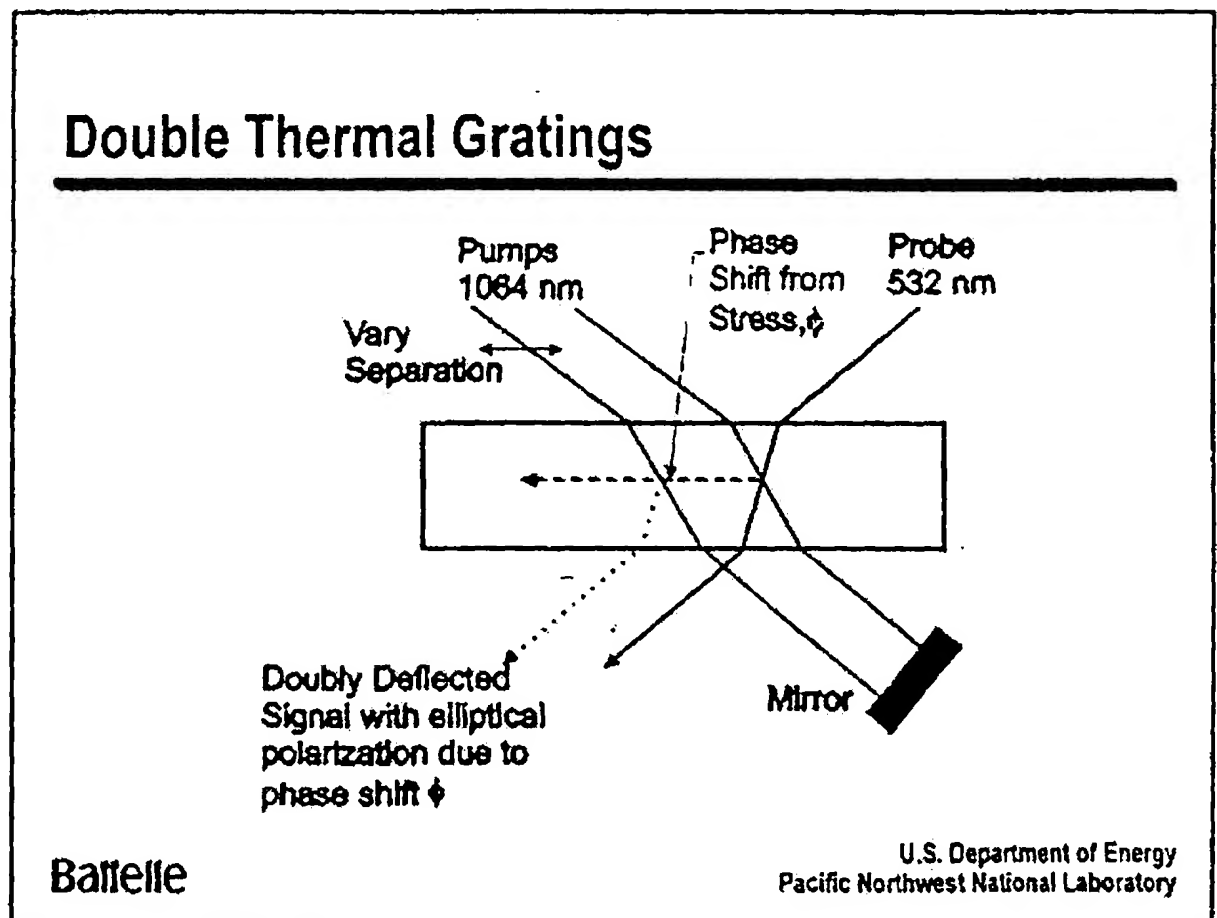
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2877

3. Claims 1-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over the document cited on the form 1149 filed 3 August 2001, identified as "slides from 'proceedings of the FY 1999 Glass Industry Project Review'"

One slide, on page 7 of the document, shows



The previous slide in that document identifies the sample as "tempered automotive glass", and notes that the technique was used for obtaining "measured in-plane stress."

The first slide on page 6, showing a related thermal grating system, notes that the pump beams and retroreflecting mirror will create standing waves which in turn create the thermal gratings, and notes that the beams is “diffracted parallel to the faces of the glass plate”.

The pump beams are shown in the slide above as having a wavelength of exactly twice the probe beam (1064 nm vs. 532 nm.); one known and obvious manner of obtaining this relationship is to generate one frequency from the other from a single source by known frequency doubling techniques or the like.

The slide shown above notes that the doubly deflected signal has “elliptical polarization due to phase shift ϕ ”, this at least clearly suggests “detecting the polarization state of the exiting doubly deflected beam.”

As the slide above shows the deflected beam being deflected within the glass sheet, it would have been obvious to have that beam substantially smaller than the thickness of the glass plate in order to maintain a “clean” intermediate beam by avoiding possible edge effects of the thermal grating near the surfaces of the glass plate and without interference effects in the deflected beam arising from reflections by a edges of a wider beam from the surfaces of the plate.

It would have been obvious to configure the width of the three beams shown in the slide above to match their respective purposes of creating the thermal gratings for the pump beams and for diffracting “cleanly” for the probe beam. There would be no reason for those in the art to assume that identical sized beams would

Art Unit: 2877

serve the different purposes equally well, and no more than routine experimentation would be needed to find appropriate sizes for the different beams.

The slide above shows varying the separation of the two pump beams. Using a motorized mechanism for this would have been obvious.

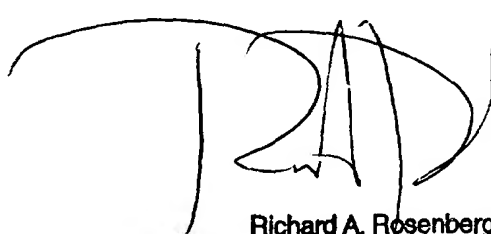
Selecting to power of the beams to generate the thermal gratings but avoid as much as possible larger scale thermal expansion effects which may generate their own stresses in the glass and thus reduce the accuracy of the measurement would have been obvious.

4. On page 12 of the instant specification, line 15, the serial number of the related case needs to be provided.
5. The references cited by the examiner show related art.
6. Papers related to this application may be submitted to Group 2800 by facsimile transmission. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The fax number is (703) 308-7722.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. A. Rosenberger whose telephone number is (703) 308-4804.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.

R. A. Rosenberger
5 September 2003



Richard A. Rosenberger
Primary Examiner